

Notice of Allowability

Application No.

10/543,092

Examiner

John S. Chu

Applicant(s)

MIYAMATSU ET AL.

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/1/07.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

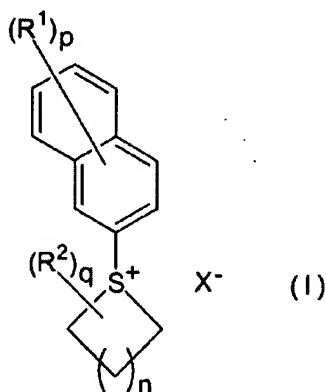
Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: The claimed invention is drawn to the following;

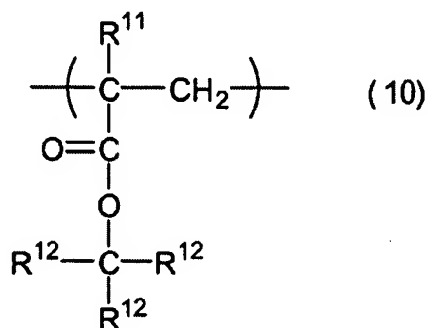
1. (Original) A sulfonium salt compound shown by the following formula (I),



wherein R^1 represents a linear or branched alkyl group having 1-14 carbon atoms, a monovalent hydrocarbon group having an alicyclic skeleton and containing 3-14 carbon atoms, a linear or branched alkoxy group having 1-14 carbon atoms, a group represented by $-OR^3$ (wherein R^3 is a monovalent hydrocarbon group having an alicyclic skeleton and containing 3-14 carbon atoms), a linear or branched alkyl sulfanyl group having 1-14 carbon atoms, an organic sulfanyl group having an alicyclic skeleton and containing 3-14 carbon atoms, a linear or branched alkane sulfonyl group having 1-14 carbon atoms, or an organic sulfonyl group having an alicyclic skeleton and containing 3-14 carbon atoms, two or more R^1 being either the same or different, R^2 represents a substituted or unsubstituted, linear, branched, or cyclic alkyl group having 1-14 carbon atoms, or two or more R^2 groups bond to form a monocyclic structure having 3-14 carbon atoms or a polycyclic structure having 6-14 carbon atoms, two or more R^2 groups being either the same or different, p is an integer of 0-7, q is an integer of 0-6, n is an integer of 0-3, and X^- represents a sulfonic acid anion.

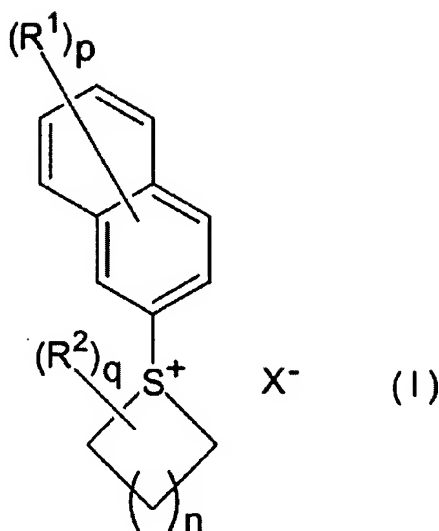
8. (Original) A positive-tone radiation-sensitive resin composition comprising
(A) a photoacid generator comprising the photoacid generator according to claim 7 and
(B) an acid-dissociable group-containing resin which is insoluble or scarcely soluble in alkali and becomes alkali soluble when the acid-dissociable group dissociates.

9. (Original) The positive-tone radiation-sensitive resin composition according to claim 8, wherein the resin of the component (B) has a recurring unit of the following formula (10),



wherein R¹¹ represents a hydrogen atom or methyl group and R¹² individually represents a linear or branched alkyl group having 1-4 carbon atoms or a substituted or unsubstituted monovalent alicyclic hydrocarbon group having 3-20 carbon atoms, or any two of R¹² groups form, in combination and together with the carbon atom with which these groups bond, a substituted or unsubstituted, bridged or unbridged, divalent alicyclic hydrocarbon

20. (New) A sulfonium salt compound shown by the following formula (1),



wherein R^1 represents a linear or branched alkyl group having 1-14 carbon atoms, a monovalent hydrocarbon group having an alicyclic skeleton and containing 3-14 carbon atoms, a linear or branched alkoxy group having 1-14 carbon atoms, a group represented by $-OR^3$ (wherein R^3 is a monovalent hydrocarbon group having an alicyclic skeleton and containing 3-14 carbon atoms), a linear or branched alkyl sulfanyl group having 1-14 carbon atoms, an organic sulfanyl group having an alicyclic skeleton and containing 3-14 carbon atoms, a linear or branched alkane sulfonyl group having 1-14 carbon atoms, or an organic sulfonyl group having an alicyclic skeleton and containing 3-14 carbon atoms, two or more R^1 being either the same or different, R^2 represents a substituted or unsubstituted, linear, branched, or cyclic alkyl group having 1-14 carbon atoms, or two or more R^2 groups bond to form a monocyclic structure having 3-14 carbon atoms or a polycyclic structure having 6-14 carbon atoms, two or more R^2 groups being either the same or different, p is an integer of 0-7, q is 0, n is an integer of 0-3, and X^- represents a sulfonic acid anion.

Applicants have overcome the rejections outstanding by demonstrating that the prior art references fail to meet the claimed sulfonium compound as now recited above. The prior art references to SUWA et al disclosed a 1-position substituted naphthalene sulfonium compound wherein applicants have pointed out that the claimed compound is a 2-position substituted naphthalene sulfonium compound. EBATA et al has been removed as prior art wherein applicants have also shown that the disclosed compound is a 1-position substituted naphthalene sulfonium compound, while the claimed invention is 2-position substituted naphthalene sulfonium compound. Applicants in addition have stated that EBATA et al and the current application to 10/543,092 was commonly owned at the time the invention was made thus overcoming the 35 U.S.C. 103(a) rejection under a 102(e) date.

Because none of the prior art references meet or render obvious the claimed invention, claims 1-20 are seen as allowable and passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Application/Control Number:
10/543,092
Art Unit: 1795

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/
Primary Examiner, Group 1700

J.Chu
December 10, 2007